

REMARKS/ARGUMENTS

Amendments to Specification

5 Applicant has amended the specification to provide the publication number of Provisional Application Number 60/281,524. In addition, page 2 has been amended to delete the Claim of Priority, as listed below

Claim of Priority, ¶3 Of The Examiner's Remarks

10 With regard to the Claim of Priority, Applicant herewith withdraws its claim of priority based on the Applicant's prior applications, as listed on page 2 of the Specification, such that the effective filing date of claims 12 – 33 is December 7, 2001. Accordingly, the claim of priority on page 2 of the instant specification has been canceled, see above, and it is therefore submitted that the term of any patent granted on this application shall be 20 years from its December 7,
15 2001 filing date.

Rejection of Claims 12 – 17 and 25 – 27 Under 35 USC §103

 Applicant acknowledges that claims 34 – 38 have been allowed, and that claims 18 – 24 and 28 – 33 have been objected to as being dependent on a rejected base claim. It is believed that with the amendments of claims 12, 14, 15 and 25, above, claims 12 and 14 – 33 are properly
20 allowable over the prior art.

 Specifically, Applicant respectfully submits that Claims 12, and 14 – 17 and 25 – 27, particularly has herewith amended, are not obvious over Marsh (U.S. Patent 6,142,721) in view of Melcher (U. S. Patent Application 2001/0041114) and further in view of Weers (U. S. Patent 6,666,641).

Of particular importance is step (d) of claim 12, particularly, as herewith amended, which states as follows:

d. after laminating said double laminated cover, roughening at least the surface of ~~conditioning~~ a central portion of the inner face of said inner lamination ~~double laminated cover such~~ so that said adhesive will effectively bind said spine to said inner lamination in the area of said central portion;

Similarly, step (e) of claim 25 has been amended as follows:

e. conditioning at least the surface of a portion of the inner face of said double laminated cover in an area to be adhered to said spine of said book block so as to facilitate adhesive binding of said spine of said book block with said double laminated cover in the area of said central portion;

It is respectfully submitted that none of the prior art references cited by the Examiner nor known to the applicant teaches or suggests the above steps (d) or (e) of either claim 12 or claim 25, respectively, nor is there any showing of any motivation that would lead one of ordinary skill in the art to modify the book binding methods disclosed by Marsh, Melcher or Weers to result in the methods described by claims 12, 14 – 17 and 25 – 27. As will be shown, both Melcher and Weers teach away from applicant's claimed methods, and Marsh does not deal with a laminated cover.

Marsh '721 discloses binding a book block to a paper cover using an ultrasonic horn to activate (melt) a hot melt adhesive. Marsh '721 has no disclosure or suggestion that the cover of the book is laminated with a plastic film.

Melcher discloses a book binding system and method where (see Paragraph 17) the “[c]over 10 is likewise preferably made of synthetic paper and will generally be, but is not required to be, of a thickness greater than that of the pages 20. Cover 10 includes top 12, bottom 13 and spine 40. Spine 40 is bound to pages 20. **Spine 40 includes series of depressions or wells 41 into which an adhesive or glue is introduced.** Wells 41 preferably have roughened surface to facilitate the placement and retention of the glue for the binding.” (emphasis added). As shown in Fig. 3b, the spine 40 has one well 41 formed therein for the edge of each of the pages 20 and each page edge is inserted into its respective well 41. The “depressions or wells 41” are shown to be somewhat wider than the thickness of the pages 20 and they must at least be as long as the length of the pages 20, and they must be of a sufficient depth “to facilitate the placement and retention of the glue”.

As shown in Figs. 3a and 3b of Melcher, there is one well 41 for each page 20 (or group of pages, i.e., a signature). As specified in Paragraph 16, Melcher states that “synthetic paper with thickness up to about 0.5 mm or more is acceptable.” For reference, 0.5 mm = 0.0197 inches – nearly 20/1000ths of an inch. This would mean that each well 41 must be at least 0.5mm wide for a single page. This would limit the number of pages per inch of thickness of the resulting book to about 50 pages/inch. Most perfect bound books having paper pages have about 250 - 800 pages/inch. Many perfect bound books do not use signatures, put rather the edges of individual paper pages are bound directly to the spine of the cover. Thus, it is submitted that because one of the wells 41 of Melcher must be provided for each of the pages (or signatures), one skilled in the binding art would recognize that the binding method of Melcher would not be

suitable for use with conventional perfect bound books having paper text pages because the binding must be matched to the number of pages (or signatures) in the book block.

Further, one of ordinary skill in the art would understand that the wells or depressions 41 shown in Fig. 3b of Melcher must be pre-formed in the spine 40. While Melcher does not
5 disclose how or when the wells 41 are formed in the spine, because of the thickness of the spine 40, as shown in Fig. 3b, one of ordinary skill in the art would know that the wells 41 must be either molded or machined in the spine.

Further, each of the pages must somehow be inserted into their respective wells. It is submitted that this would pose a major problem in the automated perfect binding of books
10 having hundreds of pages, particularly where each book to be bound may have a different number of pages.

Moreover, the necessity of having one well 41 for each page (or group of pages) would require that a spine would only be usable for a specific book where the number of pages is known in advance of binding. For books printed on demand where the number of pages could
15 vary for each book to be bound, the requirement that such covers must have pre-formed wells 41 in the spine area of the cover would present a severe inventory problem because the number of pages will change for each successive print on demand book to be bound.

Weers (U. S. Patent 6,666,641) describes a laminated book cover in which a book cover 11 (which as described in Col. 1, ll. 16 – 18) are typically “made of heavy and expensive paper”.
20 Weers, like the present invention, discloses (see Col. 1, l. 59 – Col. 2, l. 7) that paper covers that are laminated on both sides is “discouraged” because hot melt glue “does not bind to the plastic laminate in the binding process”. The invention described by Weers is, like the present

invention, “facilitates the use of soft book covers that are laminated with plastic on both sides to provide a more durable and low cost soft book cover when hot melt glue is used in the process of book binding that does not bond with the laminated book covers.” However, Weers uses a method and process very different from that described and claimed in the instant application where the Applicant facilitates the binding of the paper text pages to the inner laminate plastic film.

As shown in Fig. 1 and as described in Col. 2, ll. 7 et seq. of Weers, a book cover 11 is laminated on both sides with plastic laminate (film) 10. However, in a clear departure from applicant’s claimed method, Weers requires that a strip of paper 12, the width and length of the spine 9, be bonded to the spine on the inside of the book cover by means of an adhesive 13 that will bond to the laminate 10 and the paper strip 12. The method disclosed by Weers requires the additional steps of applying the adhesive 13 to the inner face of the laminated cover in the region of the spine, then to apply the paper strip 12 to the adhesive 13, and then applying adhesive to the paper strip so that the edges of the pages comprising the book block will adhere to the adhesive on the paper strip. In sharp contrast, applicant’s claimed method allows the spine of the book to be directly adhered to the inner lamination of the book cover – there is no need for a separate paper strip to be bonded to the inner face of the laminated cover.

Weers has no disclosure of any step of roughening or conditioning the inner plastic film laminate to allow the adhesive to better adhere to the plastic film.

Another disadvantage of Weers is that in the binding of books printed on demand, the number of pages and hence the thickness of the book block (the group of text pages) can vary significantly between successive books to be bound. For example, a first print on demand book

to be bound may have 250 pages and the next may have 500 or more pages. Weers has no disclosure as to how the width of the paper strip could be varied. Likewise, print on demand books may vary in height from, for example, 9 inches to 11 inches. Weers has no disclosure as to how the length the paper strip can be varied to accommodate books of different heights.

5 It will be appreciated that while the claims of Applicant's invention specify that the inner face of the inner lamination be roughened (claim 12) or conditioned (claim 25), if a larger area than the thickness of the book block to be bound is roughened, it will not matter with Applicant's method. However, with the system disclosed in Weers, if the width of the paper strip is too wide, this may prevent the cover from properly wrapping around the spine of the book block.
10 Likewise, in Melcher, if the width of the spine with the pre-formed wells 41 is wider than the thickness of the book block to be bound, the cover will not properly conform to the book.

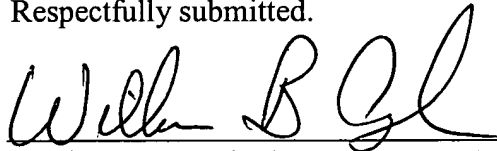
 Further, at paragraph 17 of Melcher, it is disclosed that "Wells 41 preferably have roughened surface to facilitate the placement and retention of the glue for the binding." However, there is nothing in the disclosure of Melcher that would motivate one of ordinary skill
15 in the art to roughen the inner surface of the inner lamination of a double laminated cover, such as disclosed in Weers, to eliminate the need for the paper strip 12 so that text pages may be properly adhered to the inner lamination along the spine of the book.

 It is submitted that a conclusion that the roughening of the sides of the wells 41 of Melcher teaches applicant's claimed invention could only be arrived at through the improper use
20 of hindsight using applicant's disclosure as a guide to improperly combine the prior art references.

In summary, it is submitted that the combination of Marsh (U. S. Patent 6,142,721) in view of Melcher (U. S. Patent Application 2001/0041114) and further in view of Weers (U. S. Patent 6,666,641) fails to show or to teach applicant's claimed method in which the inner laminate, after the cover is laminated is roughened (claim 12) or conditioned (claim 25) so that the adhesive will effectively bind the spine of the book block directly to the inner face of the double laminated cover.

In view of the above, reconsideration of and a notice of allowance of claims 12 and 14 – 38 is respectfully solicited.

Respectfully submitted.



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